

# Maintenance Windows

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The Meridian 1 switch has over 600 overlay-based maintenance commands and over 200 types of circuit cards to support its powerful capabilities. To maintain a Meridian 1, you must remember (or look up) which overlay has the appropriate commands and the syntax of each command—an enormous task!

Welcome to MAT 5 Maintenance Windows. The 37 Maintenance Overlays are now grouped into eight hardware-related windows to allow you to perform all maintenance tasks without having to remember or look up any overlay-based commands. The new interface provides a comprehensive view of Meridian 1 hardware configuration with the following benefits:

- Quickly see the equipped hardware. The hardware list works like a spread sheet data view—you can scroll through the list, sort the list, and select items for changing
- Select an item from the list and apply a Maintenance command from the right-mouse button popup menu
- Print the list or copy it to a spreadsheet
- Select a TN or DN and print the TN/DN block
- See Enabled/Disabled status in *real time*

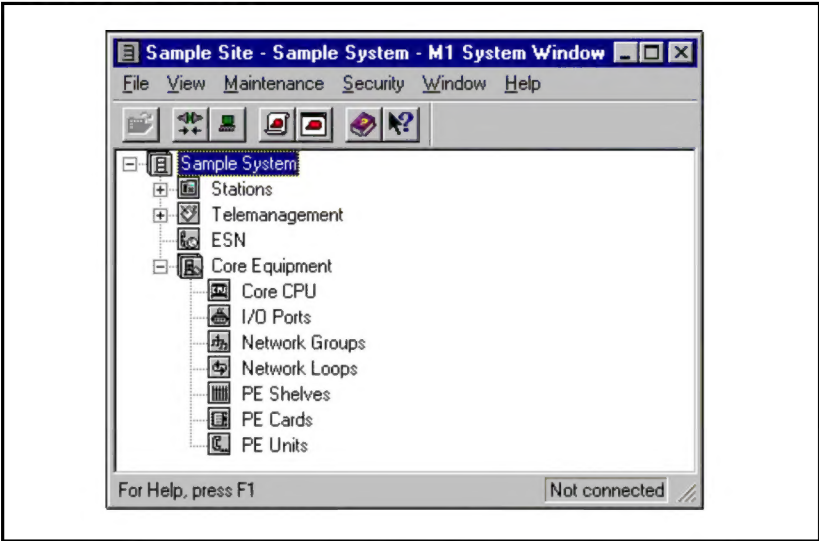
For example, to disable a network loop, you click on the loop number and choose the **Disable** command from the menu. Maintenance Windows loads the appropriate overlay, executes the command, and displays the result of the action in a window that you can scroll and save.

This chapter of the *Maintenance Windows User's Guide* describes functions that are common to all of the Maintenance window applications. Be sure to read this section thoroughly to help you use these applications efficiently.

## Launching a Maintenance Windows application

You launch Maintenance Windows applications from the MAT System window.

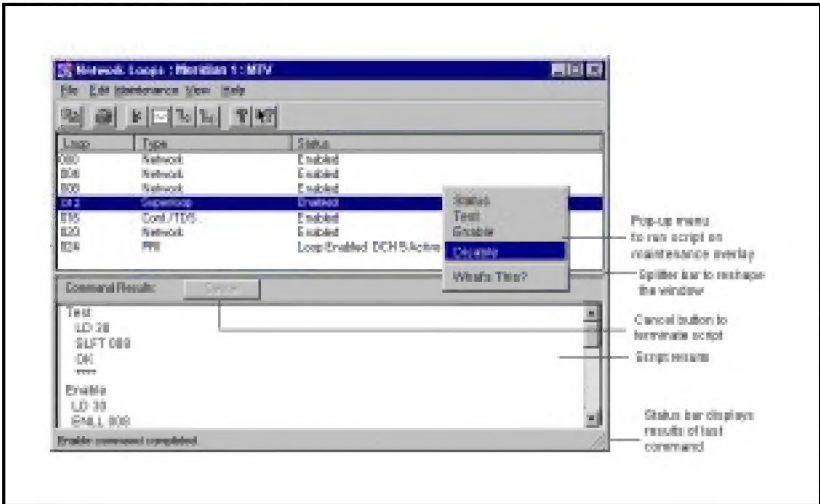
Figure 1  
MAT System window



Under **Core Equipment**, double-click the icon for the desired Maintenance Windows application to launch that application. The appropriate window appears. Each application is described in detail in a separate chapter in this document.

For example, double-click on the **Network Loop** icon to open the Network Loops window. See **Figure 2**. Each loop is listed, along with descriptive information. From this window, you can sort this information, select a loop and run maintenance commands, and get help on the selected loop.

**Figure 2**  
**Network Loops window**



## Maintenance Windows applications

MAT Maintenance Windows includes the following applications:

### Core CPU

The CPU window displays the status of cards in both CPU shelves on the Meridian 1 at the selected site. You can perform actions and tasks on cards in the CPU shelf from the CPU window.

### I/O Ports

The I/O (Input/Output) Ports window displays the status of all I/O ports on the Meridian 1, and allows you to execute actions and tasks on a selected port.

### Network Groups

The Network Groups window displays the status of all Network Group Cards on the Meridian 1, and allows you to execute actions and tasks on a selected card.

### Network Loops

The Network Loops window lists all the network loops on the Meridian 1 system. It allows you to execute actions and tasks on a selected loop by choosing commands from the Maintenance menu.

### PE Shelves

The PE Shelves window displays the status of the Peripheral Controller Cards for each PE Shelf on the Meridian 1, and allows you to execute actions and tasks on a selected card.

### PE Cards

The PE Cards window displays the status of all EPE and IPE Peripheral Equipment cards for each PE Shelf on the Meridian 1, and allows you to execute actions and tasks on a selected card.

### PE Units

The PE Units window displays information for all PE units and Directory Numbers on the Meridian 1 system, and allows you to execute actions and tasks on a selected unit.

### **B and D-channels**

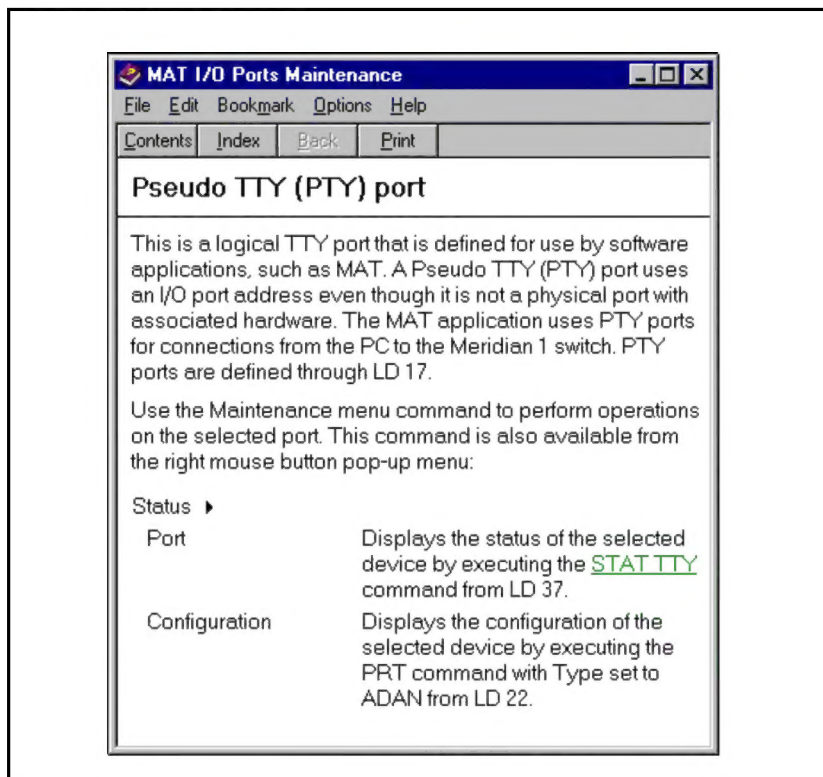
The PRI/PRI2 B and D-channels window displays the B and D-channels on the selected digital trunk (for example, PRI loop), and allows you to execute actions and tasks on a selected channel.

## **Full documentation in on-line help**

Each Maintenance Windows application has been designed to be fully documented in the on-line help. Each menu command, button, and field is documented. Please be sure to consult the on-line help if you wish to get more detail about any of these items.

For help on an object in a list, select the item and use the right mouse button to select **What's This?**. Descriptive information on the item appears. For example, ask for help on a TTY object and the window shown in **Figure 3** appears.

**Figure 3**  
**What's This help on PTY**



## Performing a maintenance task on an item

To perform a maintenance task on a card, loop, shelf, and so on, follow these steps:

- 1 Open the appropriate Maintenance Windows application.
- 2 Select the item from the list.
- 3 Choose a command from the **Maintenance** menu, the toolbar, or by using the right mouse button popup menu. A confirmation dialog appears for potentially destructive commands.
- 4 The script appears in the command result section of the window, followed by the overlay output.

### Meridian 1 connection

Maintenance window applications are connected to the Meridian 1 by a Pseudo TTY (PTY). A PTY is a “software only” TTY that uses an I/O port address. PTYs are displayed in the I/O Ports window.

- One PTY is used for all Maintenance Windows users connected to the system (even from multiple PCs)
- One PTY is used for each System Terminal connection even if it is not logged into the overlays

### Queueing scripts

If the Meridian 1 is currently processing another user’s script, your command is placed in a queue. You must wait until your script is finished processing before you can choose another **Maintenance** menu command. However, while you are waiting, you can perform maintenance tasks on another type of system component using a different Maintenance Windows application.

### Cancelling scripts

To remove a command from the queue or to cancel a command in progress, click **Cancel** or press the <Esc> key. If a command is in progress, **Cancel** aborts the current command and overlay by sending four stars (\*\*\*\*).

## Refreshing the hardware status in the list

The hardware status in the list is updated as follows:

- The list is updated every few seconds even if there is no activity on the MAT PC. You specify the interval on a per-window basis. See the **About Maintenance Windows** item in the **Help** menu.
- The selected object status is updated at every MAT PC after every script. Thus, disabling a port from one PC updates its status on all other PCs.
- The entire list is updated after some scripts because multiple objects are affected. Examples: Split CPU, Disable MSDL
- You can manually refresh the hardware status display by pressing <F5>.



## Menu Commands

Each menu command is designed to be fully documented in on-line help. The Status Bar provides useful information on the script to run **“Using the Status Bar” on page 1** ).

You can also read **What’s This** help on any menu command. Press **<Shift><F1>** (or select **What’s This** from the **Help** menu) and select the command for full on-line documentation.

The **Maintenance** menu is unique for each type of hardware application, and is also designed to be fully documented in on-line help. In addition to the information provided in the Status Bar, you can read **What’s This** help on any menu command as described above.

## Getting help on an error message

Sometimes, a maintenance command will result in a Meridian 1 error message, such as NWS010. To get help on the last error message (even if it has scrolled out of view) choose **Error or Message** from the **Help** menu.

To get help on a previously-displayed error message:

— Use the scroll bar to move to the error message. Double-click the error message.

**or**

— Select the error and choose **Error or Message** from the **Help** menu.

**or**

— Press **<Ctrl> F** for information on the last error message.

## Getting around in the window

You can use the window in the following ways:

### Customizing the window and columns

- Resize the window and columns using standard Windows 95 controls.
- Use the horizontal or vertical scroll bars to move around in the alarm display.
- An ellipsis (...) after column text indicates there is more information than will fit in the column. You can resize the column by dragging the column divider to make more room for text.
- A splitter bar divides the window into two display areas. Drag the splitter bar to change the sizes of the card list and command results display areas.

### Sorting the list

By default, items are listed in an order that makes sense for that application. You can sort the list according to another column by clicking in that column heading. Click to sort in ascending order (an “up” arrow appears in the heading); click again for descending order (“down” arrow).

**Note:** For help on the definition of any column in the list, click **What’s This** in the **Help** menu, and then click the column title.

### Using shortcuts

You can perform the following common tasks using the accelerator keys:

- **<Ctl>R (Status)**—Displays detailed status information for the selected hardware device
- **<Ctl>T (Test)**—Performs the appropriate tests on the selected hardware device
- **<Ctl>W (Enable)**—Restores the selected hardware device to service
- **<Ctl>D (Disable)**—Removes the selected hardware device from service

## Using the Toolbar

The Toolbar gives you quick access to selected commands. Each button is documented in the on-line help. See [Figure 4](#).

**Figure 4**  
CPU toolbar



## Using the Status Bar

To display or hide the Status Bar located at the bottom of the window, use the **Status Bar** command in the **View** menu.

The Status Bar describes actions of the menu commands as you use the mouse to navigate through menus. When you select the **Maintenance** menu item, the status bar displays the following:

- The type of object selected
- The first overlay command in the script

When you run the **Maintenance** menu command, the Status Bar describes the progress of the command while it executes. For example, the Status Bar shows “Enable command in progress” when you choose the **Enable** command.

The Status Bar also describes the actions of the Toolbar buttons as you press them.

## Printing

You can print Maintenance Windows information by selecting the lines to print in the list or the command results area (or the entire section), and selecting **Print** from the **File** menu. Select **Print to File** in the Print dialog to export the data for use in a spreadsheet or other application.

## Supported Systems

Maintenance Windows is only supported on the MAT Release 5 and on Meridian 1s with X11 Release 22 or later and the MAT Management Interface package (296).

The following Meridian 1 systems are supported:

- Option 11C
- Option 51C
- Option 61C
- Option 81
- Option 81C

## Feature Limitations

- Not all hardware maintenance commands are supported. See the tables in each Maintenance Window application chapter for the list of supported hardware and commands.
- Only one user can access a maintenance overlay at a time (this is an existing limitation). Commands issued from a Maintenance window will be queued if:
  - A TTY user has loaded a maintenance overlay
  - Another Maintenance window (same or different user) is running a script that uses a maintenance overlay
- Only one command can be issued from a Maintenance window at a time (that is, you must wait until the first command is completed before issuing another).
- One Pseudo TTY port is required for Maintenance Windows (regardless of the number of windows and logged-in users). Each instance of the System Terminal window requires an additional Pseudo TTY port. This is in addition to the PPP/ethernet ports required for the basic MAT PC connection.
- Maintenance window menus are not context sensitive to the maintenance state of the selected Meridian 1 object. For example, the enable command will not be grayed out if the object is already enabled. You will get the same response as entering the enable command in the overlay (usually an error message stating that the card is already enabled).